

U.S.S.N. 07/867,719
Filed: April 13, 1992
PRELIMINARY AMENDMENT

On page 20, line 28, please insert -(Sequence Listing
a90 ID No. 117)-- after "PPPGMIPP".

After page 29, please insert the enclosed gene sequence listing as new pages 30-96. Please renumber pages 30-37 as pages 97-104.

In the Claims

1. (amended) A linear epitope for a human autoantibody selected from the group of peptides of less than forty amino acids, beginning with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of the La/SSB epitopes: 136, QVLNIQMRRTLHKAFKGS (Sequence Listing ID No. 19), 139, NIQMRRTLHKAFK (amino acids 4-16 of Sequence Listing ID No. 19), 144, RTLHKAFK (amino acids 9-16 of Sequence Listing ID No. 19), 17, ICHQIEYYFGDFNLPRDKFLK (Sequence Listing ID No. 20), 24, YFGDFNLP (amino acids 8-15 of Sequence Listing ID No. 20), 46, WVPLEIMIKFNR (Sequence Listing ID No. 21), 47, VPLEIMIK (amino acids 2-9 of Sequence Listing ID No. 21), 86, [KTKIRRSPSKPL] KTKIRRSPSKPL (Sequence Listing ID No. 22), [89] 88, KIRRSPSK (amino acids 4-11 of Sequence Listing ID No. 22), 56, NRLNRLTTDFNVIVE, (Sequence Listing ID No. 23), 56, NRLNRLTT (amino acids 1-8 of Sequence Listing ID No. 23), 257, GEIKWIDFVRGAK (Sequence Listing ID No. 24), 260, KWIDFVRGAK (amino acids 4-13 of Sequence Listing ID No. 24), 262, IDFVRGAK (amino acids 6-13 of Sequence Listing ID No. 24), 325,

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SLNKWKSKGRRFKGKGKGNK (Sequence Listing ID No. 25), 330, KSKGRRFK
(amino acids 6-13 of Sequence Listing ID No. 25), 292,
GNLQLRNKEVTW (Sequence Listing ID No. 26), 296, LRNKEVTW (amino
acids 5-12 of Sequence Listing ID No. 26), 154, IFVVFDSIE
(Sequence Listing ID No. 27), 155, FVVFDSIE (amino acids 2-9 of
Sequence Listing ID No. 27), 176, KETDLLILFKDDYFA (Sequence
Listing ID No. 28), 182, ILFKDDYF (amino acids 7-14 of Sequence
Listing ID No. 28), 104, YKNDVKNRSVYIKGFPT (Sequence Listing ID
No. 29), 112, SWYIKGFP (amino acids 9-16 of Sequence Listing ID
No. 29), 63, TDFNVIVE (Sequence Listing ID No. 30), 64, DFNVIVEA
(amino acids 2-9 of Sequence Listing ID No. 30), 270, EGIILFKEKAK
(Sequence Listing ID No. 31), 270, EGIILFKE (amino acids 1-8 of
Sequence Listing ID No. 31), 354, KVQFQGKTKFASD, (Sequence
Listing ID No. 32), 360, KKTKFASD (amino acids 7-14 of Sequence
Listing ID No. 32), 246, REDLHILF (Sequence Listing ID No. 33),
232, CLLKFSGD (Sequence Listing ID No. 34), 379, TGPVKRAR
(Sequence Listing ID No. 35), 200, KVEAKLRAKQ (Sequence Listing
ID No. 36), 202, EAKLRAKQ (amino acids 3-10 of Sequence Listing
ID No. 36), ;

the Ro/SSA epitopes: 30, MNRLHRFL (Sequence
Listing ID No. 37), 37, LCFGSEGGT (Sequence Listing ID No. 38),
38, CFGSEGGT (amino acids 2-9 of Sequence Listing ID No. 38),
[44] 41, SEGGTYYIKEQ (Sequence Listing ID No. 39), [45] 42,
EGGTYYIKEQ (amino acids 2-11 of Sequence Listing ID No. 39), [47]

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44, GTYYIKEQ (amino acids 4-11 of Sequence Listing ID No. 39),
[47] 44, GTYYI (amino acids 4-8 of Sequence Listing ID No. 39),
[74] 76, EIKSFSQEGRT (Sequence Listing ID No. 40), 78, KSFSQEGR
(amino acids 3-10 of Sequence Listing ID No. 40), 81, SQEGRTTKQ
(Sequence Listing ID No. 41), 84, GRTTKQEPM (Sequence Listing ID
No. 42), [105] 106, STKQAAFKAV (amino acids 2-11 of Sequence
Listing ID No. 43), [106] 105, ISTKQAAFKAVS (Sequence Listing ID
No. 43), [109] 108, KQAAFKAV (amino acids 4-11 of Sequence
Listing ID No. 43), 111, AFKAVSEVC (Sequence Listing ID No. 44),
126, FTFIQFKKDLKESMK (Sequence Listing ID No. 45), 130, QFKKDLKE
(amino acids 5-12 of Sequence Listing ID No. 45), 138, SMKCGMWGRA
(Sequence Listing ID No. 46), 139, MKCGMWGRA (amino acids 2-10 of
Sequence Listing ID No. 46), 142, GMWGRALRKAIA (Sequence Listing
ID No. 47), 145, GRALRKAI (amino acids 4-11 of Sequence Listing
ID No. 47), 165, [ALAVTKYKORNGWSHKDLLRLSH]
ALAVTKYKORNGWSHKDLLRLSH (Sequence Listing ID No. 48), 169,
[TKYKORNG] TKYKORNG (amino acids 5-12 of Sequence Listing ID No.
48), 173, [ORNGWSHK] ORNGWSHK (amino acids 9-16 of Sequence
Listing ID No. 48), 182, LLRLSHLKPSS (Sequence Listing ID No.
49), 184, RLSHLKPS (amino acids 3-10 of Sequence Listing ID No.
49), [198] 199, TKYITKGW (amino acids 2-9 of Sequence Listing ID
No. 71), [201] 202, ITKGWKEV (amino acids 5-12 of Sequence
Listing ID No. 71), 210, HELYKEKA (Sequence Listing ID No. 50),
212, LYKEKALSV (Sequence Listing ID No. 51), [215] 216,

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~~KALSVETEKLLKYL (Sequence Listing ID No. 52), [221] 222, TEKLLKYL
(amino acids 7-14 of Sequence Listing ID No. 52), 224, KLLKYLEA
(Sequence Listing ID No. 53), 229, LEAVEKVKRTKDE (Sequence
Listing ID No. 54), 234, KVVKRTKDE (amino acids 6-13 of Sequence
Listing ID No. 54), 257, HLLTNHLKSKEVWKALLQEMPL (Sequence Listing
ID No. 55), 263, LKSKEVWK (amino acids 7-14 of Sequence Listing
ID No. 55), 264, KSKEVWK (amino acids 8-15 of Sequence Listing
ID No. 55), 265, SKEVWK (amino acids 9-14 of Sequence Listing ID
No. 55), 280 ALLRNLGKMTA (Sequence Listing ID No. 56), 283,
RNLGKMT (amino acids 4-10 of Sequence Listing ID No. 56), 285,
LGKMTANS (Sequence Listing ID No. 57), 308, LCNEKLLKKARIHPFHI
(Sequence Listing ID No. 58), 313, LLKKARI (amino acids 6-12 of
Sequence Listing ID No. 58), 315, KKARIHPF (amino acids 8-15 of
Sequence Listing ID No. 58), 330, TYKTGHGLRGKLNWRPDE (Sequence
Listing ID No. 59), 331, YKTGHGL (amino acids 2-8 of Sequence
Listing ID No. 59), 352, ALDAAFYK (Sequence Listing ID No. 60),
355, AAFYKTFKTVPTGKRFLA (Sequence Listing ID No. 61), [362]
379, [ASMNORVLGS] ASMNORVLGS (Sequence Listing ID No. 62), 365,
EPTGKRFL (amino acids 11-18 of Sequence Listing ID No. 61), 398,
AMCMVVTR (Sequence Listing ID No. 63), 414, AFSDEMVP (Sequence
Listing ID No. 64), 420, VPCPVTTD (Sequence Listing ID No. 65),
433, VLMAMSQI (Sequence Listing ID No. 66), 445, TDCSLPMI
(Sequence Listing ID No. 67), 449, LPMIWAQKTNTPA (amino acids 3-
15 of Sequence Listing ID No. 68), [453] 472, TFAGGVHPAI~~

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~~(Sequence Listing ID No. 69), 472, [TFAGGVH^{PAI}, 472,] TFAGGVHP
(amino acids 1-8 of Sequence Listing ID No. 69), [482] 481,
IALREYRK^{KMD}IPAKL (Sequence Listing ID No. 70), 484, REYRK^{KMD}
(amino acids 4-11 of Sequence Listing ID No. 70);~~
10
and
aff
~~the Sm B/B' epitopes: [20] 28, IGT^{FKAFD} (Sequence
Listing ID No. 103), [21] 29, GTF^{KA}FDK (Sequence Listing ID No.
1), [22] 30, TFK^{AFD}KH (amino acids 1-8 of Sequence Listing ID No.
15) 29, [GTF^{KA}FDK] 30, TFK^{AFD}KHM (Sequence Listing ID No. 15) 44,
DCDEF^RKI (Sequence Listing ID No. 104) 45, [CDEF^{AKI}K] CDEF^RKIK
(amino acids 1-8 of Sequence Listing ID No. 2) 45,
CDEF^RKIKPKNAKQP (Sequence Listing ID No. 2), 46, [DEF^RKJ^{KP}]
DEF^RKIKP (amino acids 2-9 of Sequence Listing ID No. 2), 47,
EFR^RKIKPK (amino acids 3-10 of Sequence Listing ID No. 2), [76]
48, [FRKJK^{KP}KN] FRKIKPKN (amino acids 4-11 of Sequence Listing ID
No. 2), [77] 49, RKIKPKNA (amino acids 5-12 of Sequence Listing
ID No. 2), [78] 50, KIKPKNAK (amino acids 6-13 of Sequence
Listing ID No. 2), [79] 51, IKPKNAKQ (amino acids 7-14 of
Sequence Listing ID No. 2), [80] 52, [KPKNAKOP] KPKNAKOP (amino
acids 8-15 of Sequence Listing ID No. 2), [81] 53, PKNAKQPE
(Sequence Listing ID No. 105), 83, EG^{PPP}KDT (Sequence Listing ID
No. 16), 88, KDTGIARV (Sequence Listing ID No. 17), 94, RVPLAGAA
(Sequence Listing ID No. 3), 101, AGGPGVGRAAGRGV^{PAG} (Sequence
Listing ID No. 4), 104, PGVGRAAG (amino acids 4-11 of Sequence
Listing ID No. 4), 120, IPQAPAGLAG (Sequence Listing ID No. 18),~~

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~~125, AGLAGPVRGVGGPSQ (Sequence Listing ID No. 5), 131, VRGVGGPS
(amino acids 6-13 of Sequence Listing ID No. 5) 139, QQVMTPQG
(Sequence Listing ID No. 107), 140, QVMTPQGR (amino acids 1-6 of
Sequence Listing ID No. 6), 141, [VMTPOGRG] VMTPQGRG, amino acids
2-9 of (Sequence Listing ID No. 6), 144, [POGR] PQGR (amino acids
5-8 of Sequence Listing ID No. 6), 142, [MTPQGBGT] MTPQGRGT
(amino acids 3-11 of Sequence Listing ID No. 6), 143, TPQGRGTV,
(amino acids 4-11 of Sequence Listing ID No. 6), 144, PQGRGTV
(amino acids 5-12 of Sequence Listing ID No. 6) 145, QGRGTVAA
(Sequence Listing ID No. 108) 164, APTQYPPG (Sequence Listing ID
No. 109) 165, PTQYPPGR (amino acids 1-8 of Sequence Listing ID
No. 7) 166, TQYPPGRG (amino acids 2-9 of Sequence Listing ID No.
7) 167, QYPPGRGT, amino acids 3-10 of (Sequence Listing ID No. 7)
168, YPPGRGTP (amino acids 4-11 of Sequence Listing ID No. 7)
169, PPGRGTTPP (amino acids 5-12 of Sequence Listing ID No. 7)
170, PGRGTPPP (amino acids 6-13 of Sequence Listing ID No. 7)
171, GRGTPPPP (amino acids 7-14 of Sequence Listing ID No. 7)
172, RGTPPPPV (amino acids 8-15 of Sequence Listing ID No. 7)
173, GTPPPPVG (Sequence Listing ID No. 110) 174, TPPPPVGRATPPGI
(Sequence Listing ID No. 8), 175, PPPPVGRA (amino acids 2-9 of
Sequence Listing ID No. 8), 184, PPPGIMAP (Sequence Listing ID
No. 9), 188, IMAPPPGM (Sequence Listing ID No. 111), 189,
MAPPPGMRPPM (Sequence Listing ID No. 10), 189, MAPPPGMR (amino
acids 1-8 of Sequence Listing ID No. 10), 191, PPPGMR (amino~~

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~~acids 3-8 of Sequence Listing ID No. 13), 190, APPPGMRP (amino acids 2-9 of Sequence Listing ID No. 10), 191, PPPGMRPP (amino acids 3-10 of Sequence Listing ID No. 10), 192, PPGMRPPM (amino acids 4-11 of Sequence Listing ID No. 10), 202, PIGLPPARGTPIGMPP (Sequence Listing ID No. 11), 206, PPARGTPI, (amino acids 5-11 of Sequence Listing ID No. 11), 212, PIGMPPPG (Sequence Listing ID No. 12), 213, IGMPPPGM (Sequence Listing ID No. 12), 214, [GMPPPGMB] GMPPPGMR (Sequence Listing ID No. 113), [216, PPPGMB,] 215, MPPPGMRP (Sequence Listing ID No. 118), 216, PPPGMRPP (amino acids 4-11 of Sequence Listing ID No. 14), 217, PPGMRPPP (Sequence Listing ID No. 114), 220, MRPPPPGI (Sequence Listing ID No. 115), 221, RPPPPGIR (amino acids 1-8 of Sequence Listing ID No. 13), 221, RPPPPGIRGPP (Sequence Listing ID No. 13), 223, PPPGIR (amino acids 3-8 of Sequence Listing ID No. 13), 222, PPPPGIRG (amino acids 2-9 of Sequence Listing ID No. 13), 223, PPPGIRGP (amino acids 3-10 of Sequence Listing ID No. 13), 224, PPGIRGPP (amino acids 4-11 of Sequence Listing ID No. 13), 228, RGPPPPGM (amino acids 1-8 of Sequence Listing ID No. 14), 228, RGPPPPGMRPPR (Sequence Listing ID No. 14), 229, GPPPPGMR (amino acids 2-9 of Sequence Listing ID No. 14), 230, PPPPGMRP (amino acids 3-10 of Sequence Listing ID No. 14), 231, PPPGMRPP (amino acids 4-11 of Sequence Listing ID No. 14), 231, PPPGMR (amino acids 3-8 of Sequence Listing ID No. 10), and 232, PPGMRP (amino acids 5-12 of Sequence Listing ID No. 14).~~

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6. (amended) The epitope of claim 1 wherein the peptide is selected from the group consisting of 29, GTFKAFDK (Sequence Listing ID No. 1), 45, CDEFRKIKPKNAKQP (Sequence Listing ID No. 2), 94, RVPLAGAA (Sequence Listing ID No. 3), 101, AGGPGVGRAAGRGVRAG (Sequence Listing ID No. 4), 125, AGLAGPVRGVGGPSQ (Sequence Listing ID No. 5), 140, [QVMTPOGRGTVA] QVMTPOGRGTVA (Sequence Listing ID No. 6), 165, PTQYPPGRGTPPPPV (Sequence Listing ID No. 7), 174, TPPPPVGRATPPPGI (Sequence Listing ID No. 8), 184, PPRGIMAP (Sequence Listing ID No. 9), 189, MAPPPGMRPPM (Sequence Listing ID No. 10), 202, PIGLPPARGTPIGMPP (Sequence Listing ID No. 11), 212, PIGMPPPG (Sequence Listing ID No. 12), 221, RPPPPGIRGPP (Sequence Listing ID No. 13), [and] 228, RGPPPPGMRPPR (Sequence Listing ID No. 14), 30, TFKAFDKHM (Sequence Listing ID No. 15), 83, EGPPPDKT (Sequence Listing ID No. 16), 88, KDTGIARV, (Sequence Listing ID No. 17), and 120, IPQAPAGLAG (Sequence Listing ID No. 18), or mixtures thereof.

12. (amended) A method for screening patients for autoimmune disorders comprising reacting a biological sample with an epitope selected from the group of peptides of less than forty amino acids, beginning with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of

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the La/SSB epitopes: 136, QVLNIQMRRTLHKAFKGS (Sequence Listing ID No. 19), 139, NIQMRRTLHKAFK (amino acids 4-16 of Sequence Listing ID No. 19), 144, RTLHKAFK (amino acids 9-16 of Sequence Listing ID No. 19), 17, ICHQIEYYFGDFNLPRDKFLK (Sequence Listing ID No. 20), 24, YFGDFNLP (amino acids 8-15 of Sequence Listing ID No. 20), 46, WVPLEIMIKFNR (Sequence Listing ID No. 21), 47, VPLEIMIK (amino acids 2-9 of Sequence Listing ID No. 21), 86, [KKTKIRRSPSKPL] KTKIRRSPSKPL (Sequence Listing ID No. 22), [89] 88, KIRRSPSK (amino acids 4-11 of Sequence Listing ID No. 22), 56, NRLNRLTTDFNVIVE, (Sequence Listing ID No. 23), 56, NRLNRLTT (amino acids 1-8 of Sequence Listing ID No. 23), 257, GEIKWIDFVRGAK (Sequence Listing ID No. 24), 260, KWIDFVRGAK (amino acids 4-13 of Sequence Listing ID No. 24), 262, IDFVRGAK (amino acids 6-13 of Sequence Listing ID No. 24), 325, SLNKWKSKGRRFKGKGKGNK (Sequence Listing ID No. 25), 330, KSKGRRFK (amino acids 6-13 of Sequence Listing ID No. 25), 292, GNLQLRNKEVTW (Sequence Listing ID No. 26), 296, LRNKEVTW (amino acids 5-12 of Sequence Listing ID No. 26), 154, IFVVFDSIE (Sequence Listing ID No. 27), 155, FVVFDSIE (amino acids 2-9 of Sequence Listing ID No. 27), 176, KETDLLILFKDDYFA (Sequence Listing ID No. 28), 182, ILFKDDYF (amino acids 7-14 of Sequence Listing ID No. 28), 104, YKNDVKNRSVYIKGFPT (Sequence Listing ID No. 29), 112, SVYIKGFP (amino acids 9-16 of Sequence Listing ID No. 29), 63, TDFNVIVE (Sequence Listing ID No. 30), 64, DFNVIVEA

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~~(amino acids 2-9 of Sequence Listing ID No. 30), 270, EGIILFKEKAK
(Sequence Listing ID No. 31), 270, EGIILFKE (amino acids 1-8 of
Sequence Listing ID No. 31), 354, KVQFQGKKTGFASD, (Sequence
Listing ID No. 32), 360, KKTKFASD (amino acids 7-14 of Sequence
Listing ID No. 32), 246, REDLHILF (Sequence Listing ID No. 33),
232, CLLKFSGD (Sequence Listing ID No. 34), 379, TGPVKRAR
(Sequence Listing ID No. 35), 200, KVEAKLRAKQ (Sequence Listing
ID No. 36), 202, EAKLRAKQ (amino acids 3-10 of Sequence Listing
ID No. 36), ;~~

~~the Ro/SSA epitopes: 30, MNRLHRFL (Sequence
Listing ID No. 37), 37, LCFGSEGGT (Sequence Listing ID No. 38),
38, CFGSEGGT (amino acids 2-9 of Sequence Listing ID No. 38),
[44] 41, SEGGTYYIKEQ (Sequence Listing ID No. 39), [45] 42,
EGGTYYIKEQ (amino acids 2-11 of Sequence Listing ID No. 39), [47]
44, GTYYIKEQ (amino acids 4-11 of Sequence Listing ID No. 39),
[47] 44, GTYYI (amino acids 4-8 of Sequence Listing ID No. 39),
[74] 76, EIKSFSQEGRT (Sequence Listing ID No. 40), 78, KSFSQEGR
(amino acids 3-10 of Sequence Listing ID No. 40), 81, SQEGRTTKQ
(Sequence Listing ID No. 41), 84, GRTTKQEPM (Sequence Listing ID
No. 42), [105] 106, STKQAAFKAV (amino acids 2-11 of Sequence
Listing ID No. 43), [106] 105, ISTKQAAFKAVS (Sequence Listing ID
No. 43), [109] 108, KQAAFKAV (amino acids 4-11 of Sequence
Listing ID No. 43), 111, AFKAVSEVC (Sequence Listing ID No. 44),
126, FTFIQFKKDLKESMK (Sequence Listing ID No. 45), 130, QFKKDLKE~~

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~~(amino acids 5-12 of Sequence Listing ID No. 45), 138, SMKCGMWGRA
(Sequence Listing ID No. 46), 139, MKCGMWGRA (amino acids 2-10 of
Sequence Listing ID No. 46), 142, GMWGRALRKAIA (Sequence Listing
ID No. 47), 145, GRALRKAI (amino acids 4-11 of Sequence Listing
ID No. 47), 165, [ALAVTKYKORNGWSHKDLLRLSH]~~

~~ALAVTKYKORNGWSHKDLLRLSH (Sequence Listing ID No. 48), 169,
[TKYKORNG] TKYKORNG (amino acids 5-12 of Sequence Listing ID No.
48), 173, [ORNGWSHK] ORNGWSHK (amino acids 9-16 of Sequence
Listing ID No. 48), 182, LLRLSHLKPSS (Sequence Listing ID No.
49), 184, RLSHLKPS (amino acids 3-10 of Sequence Listing ID No.
49), [198] 199, TKYITKGW (amino acids 2-9 of Sequence Listing ID
No. 71), [201] 202, ITKGWKEV (amino acids 5-12 of Sequence
Listing ID No. 71), 210, HELYKEKA (Sequence Listing ID No. 50),
212, LYKEKALSV (Sequence Listing ID No. 51), [215] 216,
KALSVETEKLKYL (Sequence Listing ID No. 52), [221] 222, TEKLLKYL
(amino acids 7-14 of Sequence Listing ID No. 52), 224, KLLKYLEA
(Sequence Listing ID No. 53), 229, LEAVEVKVKRTKDE (Sequence
Listing ID No. 54), 234, KVVKRTKDE (amino acids 6-13 of Sequence
Listing ID No. 54), 257, HLLTNHLKSKEVWKALLQEMPL (Sequence Listing
ID No. 55), 263, LKSKEVWK (amino acids 7-14 of Sequence Listing
ID No. 55), 264, KSKEVWK (amino acids 8-15 of Sequence Listing
ID No. 55), 265, SKEVWK (amino acids 9-14 of Sequence Listing ID
No. 55), 280 ALLRNLGKMTA (Sequence Listing ID No. 56), 283,
RNLGKMT (amino acids 4-10 of Sequence Listing ID No. 56), 285,~~

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*B1
Cint*
~~NGKMTANS (Sequence Listing ID No. 57), 308, LCNEKLLKKARIHPFHI
(Sequence Listing ID No. 58), 313, LLKKARI (amino acids 6-12 of
Sequence Listing ID No. 58), 315, KKARIHPF (amino acids 8-15 of
Sequence Listing ID No. 58), 330, TYKTGHGLRGKLKWRPDE (Sequence
Listing ID No. 59), 331, YKTGHGL (amino acids 2-8 of Sequence
Listing ID No. 59), 352, ALDAAFYK (Sequence Listing ID No. 60),
355, AAFYKTFKTVPTGKRFLLA (Sequence Listing ID No. 61), [362]
379, [ASMNORVLGS] ~~ASMNQRVLGS~~ (Sequence Listing ID No. 62), 365,
EPTGKRFL (amino acids 11-18 of Sequence Listing ID No. 61), 398,
AMCMVVTR (Sequence Listing ID No. 63), 414, AFSDEMVP (Sequence
Listing ID No. 64), 420, VPCPVTTD (Sequence Listing ID No. 65),
433, VLMAMSQI (Sequence Listing ID No. 66), 445, TDCSLPMI
(Sequence Listing ID No. 67), 449, ~~IPMIWAQKTNTPA~~ (amino acids 3-
15 of Sequence Listing ID No. 68), [453] ~~472~~, TFAGGVHPAI
(Sequence Listing ID No. 69), 472, [TFAGGVHPAI, 472,] TFAGGVHP
(amino acids 1-8 of Sequence Listing ID No. 69), [482] ~~481~~,
IALREYRKMDIPAKL (Sequence Listing ID No. 70), 484, REYRKMD
(amino acids 4-11 of Sequence Listing ID No. 70), ;~~

the Sm B/B' epitopes: [20] ~~28~~, IGTFKAFD (Sequence
Listing ID No. 103), [21] ~~29~~, GTFKAFDK (Sequence Listing ID No.
1), [22] ~~30~~, TFKAFDKH (amino acids 1-8 of Sequence Listing ID No.
15) ~~29~~, [GTFKAFDK] ~~30~~, TFKAFDKHM (Sequence Listing ID No. 15) 44,
DCDEFRKI (Sequence Listing ID No. 104) 45, [CDEFKIK] ~~CDEFRKIK~~
(amino acids 1-8 of Sequence Listing ID No. 2) 45,

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~~CDEFRKIKPKNAKQP (Sequence Listing ID No. 2), 46, [DEFRKJKP]
DEFRKIKP (amino acids 2-9 of Sequence Listing ID No. 2), 47,
EFRKIKPK (amino acids 3-10 of Sequence Listing ID No. 2), [76]
48, [FRKJKPKN] FRKIKPKN (amino acids 4-11 of Sequence Listing ID
No. 2), [77] 49, RKIKPKNA (amino acids 5-12 of Sequence Listing
ID No. 2), [78] 50, KIKPKNAK (amino acids 6-13 of Sequence
Listing ID No. 2), [79] 51, IKPKNAKQ (amino acids 7-14 of
Sequence Listing ID No. 2), [80] 52, [KPKNAKOP] KPKNAKOP (amino
acids 8-15 of Sequence Listing ID No. 2), [81] 53, PKNAKQPE
(Sequence Listing ID No. 105), 83, EGPPPKDT (Sequence Listing ID
No. 16), 88, KDTGIARV (Sequence Listing ID No. 17), 94, RVPLAGAA
(Sequence Listing ID No. 3), 101, AGGPGVGRAAGRGVPAG (Sequence
Listing ID No. 4), 104, PGVGRAAG (amino acids 4-11 of Sequence
Listing ID No. 4), 120, IPQAPAGLAG (Sequence Listing ID No. 18),
125, AGLAGPVRGVGGPSQ (Sequence Listing ID No. 5), 131, VRGVGGPS
(amino acids 6-13 of Sequence Listing ID No. 5) 139, QQVMTPQG
(Sequence Listing ID No. 107), 140, QVMTPQGR (amino acids 1-6 of
Sequence Listing ID No. 6), 141, [VMTPOGRG] VMTPOGRG, amino acids
2-9 of (Sequence Listing ID No. 6), 144, [POGR] POGR (amino acids
5-8 of Sequence Listing ID No. 6), 142, [MTPQGBGT] MTPQGRGT
(amino acids 3-11 of Sequence Listing ID No. 6), 143, TPQGRGTV,
(amino acids 4-11 of Sequence Listing ID No. 6), 144, PQGRGTV
(amino acids 5-12 of Sequence Listing ID No. 6) 145, QGRGTVAA
(Sequence Listing ID No. 108) 164, APTQYPPG (Sequence Listing ID~~

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No. 109) 165, PTQYPPGR (amino acids 1-8 of Sequence Listing ID No. 7)
No. 7) 166, TQYPPGRG (amino acids 2-9 of Sequence Listing ID No. 7)
7) 167, QYPPGRGT, amino acids 3-10 of (Sequence Listing ID No. 7)
168, YPPGRGTP (amino acids 4-11 of Sequence Listing ID No. 7)
169, PPGRGTPP (amino acids 5-12 of Sequence Listing ID No. 7)
170, PGRGTPPP (amino acids 6-13 of Sequence Listing ID No. 7)
171, GRGTPPPP (amino acids 7-14 of Sequence Listing ID No. 7)
172, RGTTPPPV (amino acids 8-15 of Sequence Listing ID No. 7)
173, GTPPPPVG (Sequence Listing ID No. 110) 174, TPPPPVGRATPPPGI (Sequence Listing ID No. 8), 175, PPPPVGRA (amino acids 2-9 of Sequence Listing ID No. 8), 184, PPPGIMAP (Sequence Listing ID No. 9), 188, IMAPPPGM (Sequence Listing ID No. 111), 189, MAPPPGMRPPM (Sequence Listing ID No. 10), 189, MAPPPGMR (amino acids 1-8 of Sequence Listing ID No. 10), 191, PPPGMR (amino acids 3-8 of Sequence Listing ID No. 13), 190, APPPGMRP (amino acids 2-9 of Sequence Listing ID No. 10), 191, PPPGMRPP (amino acids 3-10 of Sequence Listing ID No. 10), 192, PPGMRPPM (amino acids 4-11 of Sequence Listing ID No. 10), 202, PIGLPPARGTPIGMPP (Sequence Listing ID No. 11), 206, PPARGTPI, (amino acids 5-11 of Sequence Listing ID No. 11), 212, PIGMPPPG (Sequence Listing ID No. 12), 213, IGMPPPGM (Sequence Listing ID No. 12), 214, [GMPPPGMB] GMPPPGMR (Sequence Listing ID No. 113), [216, PPPGMB,] 215, MPPPGMRP (Sequence Listing ID No. 118), 216, PPPGMRPP (amino acids 4-11 of Sequence Listing ID No. 14), 217, PPGMRPPP

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~~(Sequence Listing ID No. 114), 220, MRPPPGI (Sequence Listing ID No. 115), 221, RPPPPGIR (amino acids 1-8 of Sequence Listing ID No. 13), 221, RPPPPGIRGPP (Sequence Listing ID No. 13), 223, PPPGIR (amino acids 3-8 of Sequence Listing ID No. 13), 222, PPPPGIRG (amino acids 2-9 of Sequence Listing ID No. 13), 223, PPPGIRGP (amino acids 3-10 of Sequence Listing ID No. 13), 224, PPGIRGPP (amino acids 4-11 of Sequence Listing ID No. 13), 228, RGPPPPGM (amino acids 1-8 of Sequence Listing ID No. 14), 228, RGPPPPGMRPPR (Sequence Listing ID No. 14), 229, GPPPPGMR (amino acids 2-9 of Sequence Listing ID No. 14), 230, PPPPGMRP (amino acids 3-10 of Sequence Listing ID No. 14), 231, PPPGMRPP (amino acids 4-11 of Sequence Listing ID No. 14), 231, PPPGMR (amino acids 3-8 of Sequence Listing ID No. 10), and 232, PPGMRPPR (amino acids 5-12 of Sequence Listing ID No. 14) or mixtures thereof.~~

~~17. (amended) A method for treating patients for autoimmune disorders comprising administering to the patient an epitope selected from the group of peptides of less than forty amino acids, beginning with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of~~

~~the La/SSB epitopes: 136, QVLNIQMRRTLHKAFKGS (Sequence Listing ID No. 19), 139, NIQMRRTLHKAFK (amino acids 4-16 of Sequence Listing ID No. 19), 144, RTLHKAFK (amino acids 9-16 of~~

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~~Sequence Listing ID No. 19), 17, ICHQIEYYFGDFNLPRDKFLK (Sequence Listing ID No. 20), 24, YFGDFNLP (amino acids 8-15 of Sequence Listing ID No. 20), 46, WVPLEIMIKFNR (Sequence Listing ID No. 21), 47, VPLEIMIK (amino acids 2-9 of Sequence Listing ID No. 21), 86, [KKTKIRRSPSKPL] KTKIRRSPSKPL (Sequence Listing ID No. 22), [89] 88, KIRRSPSK (amino acids 4-11 of Sequence Listing ID No. 22), 56, NRLNRLTTDFNVIVE, (Sequence Listing ID No. 23), 56, NRLNRLTT (amino acids 1-8 of Sequence Listing ID No. 23), 257, GEIKWIDFVRGAK (Sequence Listing ID No. 24), 260, KWIDFVRGAK (amino acids 4-13 of Sequence Listing ID No. 24), 262, IDFVRGAK (amino acids 6-13 of Sequence Listing ID No. 24), 325, SLNKWKSKGRRFKGKGKGNK (Sequence Listing ID No. 25), 330, KSKGRRFK (amino acids 6-13 of Sequence Listing ID No. 25), 292, GNLQLRNKEVTW (Sequence Listing ID No. 26), 296, LRNKEVTW (amino acids 5-12 of Sequence Listing ID No. 26), 154, IFVVFDSE (Sequence Listing ID No. 27), 155, FVVFDSE (amino acids 2-9 of Sequence Listing ID No. 27), 176, KETDLLILFKDDYFA (Sequence Listing ID No. 28), 182, ILFKDDYF (amino acids 7-14 of Sequence Listing ID No. 28), 104, YKNDVKNRSVYIKGFPT (Sequence Listing ID No. 29), 112, SVYIKGFP (amino acids 9-16 of Sequence Listing ID No. 29), 63, TDFNVIVE (Sequence Listing ID No. 30), 64, DFNVIVEA (amino acids 2-9 of Sequence Listing ID No. 30), 270, EGIILFKEKAK (Sequence Listing ID No. 31), 270, EGIILFKE (amino acids 1-8 of Sequence Listing ID No. 31), 354, KVQFQGKTKFASD, (Sequence~~

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Listing ID No. 32, 360, KKTKFASD (amino acids 7-14 of Sequence

Listing ID No. 32, 246, REDLHILF (Sequence Listing ID No. 33),

232, CLLKFSGD (Sequence Listing ID No. 34), 379, TGPVKRAR

(Sequence Listing ID No. 35), 200, KVEAKLRAKQ (Sequence Listing

ID No. 36), 202, EAKLRAKQ (amino acids 3-10 of Sequence Listing

ID No. 36), :

the Ro/SSA epitopes: 30, MNRLHRFL (Sequence

Listing ID No. 37), 37, LCFGSEGGT (Sequence Listing ID No. 38),

38, CFGSEGGT (amino acids 2-9 of Sequence Listing ID No. 38),

[44] 41, SEGGTYYIKEQ (Sequence Listing ID No. 39), [45] 42,

EGGTYYIKEQ (amino acids 2-11 of Sequence Listing ID No. 39), [47]

44, GTYYIKEQ (amino acids 4-11 of Sequence Listing ID No. 39),

[47] 44, GTYYI (amino acids 4-8 of Sequence Listing ID No. 39),

[74] 76, EIKSFSQEGRT (Sequence Listing ID No. 40), 78, KSFSQEGR

(amino acids 3-10 of Sequence Listing ID No. 40), 81, SQEGRTTKQ

(Sequence Listing ID No. 41), 84, GRTTKQEPM (Sequence Listing ID

No. 42), [105] 106, STKQAAFKAV (amino acids 2-11 of Sequence

Listing ID No. 43), [106] 105, ISTKQAAFKAVS (Sequence Listing ID

No. 43), [109] 108, KQAAFKAV (amino acids 4-11 of Sequence

Listing ID No. 43), 111, AFKAVSEVC (Sequence Listing ID No. 44),

126, FTFIQFKKDLKESMK (Sequence Listing ID No. 45), 130, QFKKDLKE

(amino acids 5-12 of Sequence Listing ID No. 45), 138, SMKCGMWGRA

(Sequence Listing ID No. 46), 139, MKCGMWGRA (amino acids 2-10 of

Sequence Listing ID No. 46), 142, GMWGRALRKAIA (Sequence Listing

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ID No. 47), 145, GRALRKAI (amino acids 4-11 of Sequence Listing
ID No. 47), 165, [ALAVTKYKORNGWSHKDLLRLSH]
ALAVTKYKORNGWSHKDLLRLSH (Sequence Listing ID No. 48), 169,
[TKYKORNG] TKYKORNG (amino acids 5-12 of Sequence Listing ID No.
48), 173, [ORNGWSHK] ORNGWSHK (amino acids 9-16 of Sequence
Listing ID No. 48), 182, LLRLSHLKPSS (Sequence Listing ID No.
49), 184, RLSHLKPS (amino acids 3-10 of Sequence Listing ID No.
49), [198] 199, TKYITKGW (amino acids 2-9 of Sequence Listing ID
No. 71), [201] 202, ITKGWKEV (amino acids 5-12 of Sequence
Listing ID No. 71), 210, HELEYKEKA (Sequence Listing ID No. 50),
212, LYKEKALSV (Sequence Listing ID No. 51), [215] 216,
KALSVETEKLLKYL (Sequence Listing ID No. 52), [221] 222, TEKLLKYL
(amino acids 7-14 of Sequence Listing ID No. 52), 224, KLLKYLEA
(Sequence Listing ID No. 53), 229, LEAVEVKVKRTKDE (Sequence
Listing ID No. 54), 234, KVVKRTKDE (amino acids 6-13 of Sequence
Listing ID No. 54), 257, HLLTNHLKSKEVWKALLQEMPL (Sequence Listing
ID No. 55), 263, LKSKEVWK (amino acids 7-14 of Sequence Listing
ID No. 55), 264, KSKEVWKKA (amino acids 8-15 of Sequence Listing
ID No. 55), 265, SKEVWK (amino acids 9-14 of Sequence Listing ID
No. 55), 280 ALLRNLGKMTA (Sequence Listing ID No. 56), 283,
RNLLGKMT (amino acids 4-10 of Sequence Listing ID No. 56), 285,
LGKMTANS (Sequence Listing ID No. 57), 308, LCNEKLLKKARIHPFHI
(Sequence Listing ID No. 58), 313, LLKKARI (amino acids 6-12 of
Sequence Listing ID No. 58), 315, KKARIHPF (amino acids 8-15 of

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Sequence Listing ID No. 58), 330, TYKTGHGLRGKLIKWRPDE (Sequence Listing ID No. 59), 331, YKTGHGL (amino acids 2-8 of Sequence Listing ID No. 59), 352, ALDAAFYK (Sequence Listing ID No. 60), 355, AAFYKTFKTVPTGKRFLLA (Sequence Listing ID No. 61), [362] 379, [ASMNORVLGS] ASMNORVLGS (Sequence Listing ID No. 62), 365, EPTGKRFL (amino acids 11-18 of Sequence Listing ID No. 61), 398, AMCMVVTR (Sequence Listing ID No. 63), 414, AFSDEMVP (Sequence Listing ID No. 64), 420, VPCPVTTD (Sequence Listing ID No. 65), 433, VLMAMMSQI (Sequence Listing ID No. 66), 445, TDCSLPMI (Sequence Listing ID No. 67), 449, LPMIWAQKTNTPA (amino acids 3-15 of Sequence Listing ID No. 68), [453] 472, TFAGGVHPAI (Sequence Listing ID No. 69), 472, [TFAGGVHPAI, 472,] TFAGGVHP (amino acids 1-8 of Sequence Listing ID No. 69), [482] 481, IALREYRKKMDIPAKL (Sequence Listing ID No. 70), 484, REYRKKMD (amino acids 4-11 of Sequence Listing ID No. 70), ;

the Sm B/B' epitopes: [20] 28, IGTFKAFD (Sequence Listing ID No. 103), [21] 29, GTFKAFDK (Sequence Listing ID No. 1), [22] 30, TFKAFDKH (amino acids 1-8 of Sequence Listing ID No. 15) 29, [GTFKAFDK] 30, TFKAFDKHM (Sequence Listing ID No. 15) 44, DCDEFRKI (Sequence Listing ID No. 104) 45, [CDEFKIK] CDEFRKIK (amino acids 1-8 of Sequence Listing ID No. 2) 45, CDEFRKIKPKNAKQP (Sequence Listing ID No. 2), 46, [DEFRKJKP] DEFRKIKP (amino acids 2-9 of Sequence Listing ID No. 2) 47, EFRKIKPK (amino acids 3-10 of Sequence Listing ID No. 2), [76]

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48, [FRKJKPKN] FRKIKPKN (amino acids 4-11 of Sequence Listing ID No. 2), [77] 49, RKIKPKNA (amino acids 5-12 of Sequence Listing ID No. 2), [78] 50, KIKPKNAK (amino acids 6-13 of Sequence Listing ID No. 2), [79] 51, IKPKNAKQ (amino acids 7-14 of Sequence Listing ID No. 2), [80] 52, [KPKNAKOP] KPKNAKOP (amino acids 8-15 of Sequence Listing ID No. 2), [81] 53, PKNAKQPE (Sequence Listing ID No. 105), 83, EGPPPKDT (Sequence Listing ID No. 16), 88, KDTGIARV (Sequence Listing ID No. 17), 94, RVPLAGAA (Sequence Listing ID No. 3), 101, AGGPGVGRAAGRGVPAG (Sequence Listing ID No. 4), 104, PGVGRAAG (amino acids 4-11 of Sequence Listing ID No. 4), 120, IPQAPAGLAG (Sequence Listing ID No. 18), 125, AGLAGPVRGVGGPSQ (Sequence Listing ID No. 5), 131, VRGVGGPS (amino acids 6-13 of Sequence Listing ID No. 5) 139, QQVMTPQG (Sequence Listing ID No. 107), 140, QVMTPQGR (amino acids 1-6 of Sequence Listing ID No. 6), 141, [VMTPOGRG] VMTPOGRG, amino acids 2-9 of (Sequence Listing ID No. 6), 144, [POGR] POGR (amino acids 5-8 of Sequence Listing ID No. 6), 142, [MTPQGBGT] MTPQGRGT (amino acids 3-11 of Sequence Listing ID No. 6), 143, TPQGRGTV, (amino acids 4-11 of Sequence Listing ID No. 6), 144, PQGRGTVVA (amino acids 5-12 of Sequence Listing ID No. 6) 145, QGRGTVAA (Sequence Listing ID No. 108) 164, APTQYPPG (Sequence Listing ID No. 109) 165, PTQYPPGR (amino acids 1-8 of Sequence Listing ID No. 7) 166, TQYPPGRG (amino acids 2-9 of Sequence Listing ID No. 7) 167, QYPPGRGT, amino acids 3-10 of (Sequence Listing ID No. 7)

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168, YPPGRGTP (amino acids 4-11 of Sequence Listing ID No. 7)
169, PPGRGTTPP (amino acids 5-12 of Sequence Listing ID No. 7)
170, PGRGTPPPR (amino acids 6-13 of Sequence Listing ID No. 7)
171, GRGTTPPPP (amino acids 7-14 of Sequence Listing ID No. 7)
172, RGTTPPPPV (amino acids 8-15 of Sequence Listing ID No. 7)
173, GTPPPPVG (Sequence Listing ID No. 110) 174, TPPPPVGRATPPPGI
(Sequence Listing ID No. 8), 175, PPPPVGRA (amino acids 2-9 of
Sequence Listing ID No. 8), 184, PPPGIMAP (Sequence Listing ID
No. 9), 188, IMAPRPGM (Sequence Listing ID No. 111), 189,
MAPPPGMRPPM (Sequence Listing ID No. 10), 189, MAPPPGMR (amino
acids 1-8 of Sequence Listing ID No. 10), 191, PPPGMR (amino
acids 3-8 of Sequence Listing ID No. 13), 190, APPPGMRP (amino
acids 2-9 of Sequence Listing ID No. 10), 191, PPPGMRPP (amino
acids 3-10 of Sequence Listing ID No. 10), 192, PPGMRPPM (amino
acids 4-11 of Sequence Listing ID No. 10), 202, PIGLPPARGTPIGMPP
(Sequence Listing ID No. 11), 206, PPARGTPI, (amino acids 5-11 of
Sequence Listing ID No. 11), 212, PIGMPPPG (Sequence Listing ID
No. 12), 213, IGMPPPGM (Sequence Listing ID No. 12), 214,
[GMPPPGMB] GMPPPGMR (Sequence Listing ID No. 113), [216, PPPGMB,]
215, MPPPGMRP (Sequence Listing ID No. 118), 216, PPPGMRPP (amino
acids 4-11 of Sequence Listing ID No. 14), 217, PPGMRPPP
(Sequence Listing ID No. 114), 220, MRPPPGI (Sequence Listing ID
No. 115), 221, RPPPPGIR (amino acids 1-8 of Sequence Listing ID
No. 13), 221, RPPPPGIRGPP (Sequence Listing ID No. 13), 223,